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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Michael C. Lorenz and Gerald R. Fink
Application No.: 10/071,894 Group Art Unit: 1651
Filed: February 8, 2002 Examiner: Not Yet Assigned
Confirmation No.: 8700
Title: GLYOXYLATE CYCLE ENZYMES AS TARGETS FOR ANTIFUNGAL
DRUG DEVELOPMENT

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| CERTIFICATE OF MAILING | |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202 | |
| on <u>1-7-03</u> | <u>Jane Morgan</u> |
| Date | Signature |
| <u>JANE MORGAN</u> | |
| Typed or printed name of person signing certificate | |

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)
- ☒ under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☐ under 37 CFR 1.97(c) together with either:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, or
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, and
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.
(Filed after payment of issue fee)

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A.g.
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Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
 - ☒ Copies of cited references AR-AZ, AR2-AZ2, AR3 and AS3 are enclosed.
 - ☐ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
 - ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
 - ☐ The "concise explanation" requirement (non-English references) for reference(s) [] under 37 CFR 1.98(a)(3) is satisfied by:
 - ☐ the explanation provided on the attached sheet.
 - ☐ the explanation provided in the Specification.
 - ☐ submission of the enclosed International Search Report.
 - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
 - ☐ the enclosed English language abstract.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's
Initials

____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []
____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []
____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

Examiner

Date

- ☐ A copy of each above-cited application, including the current claims, is enclosed.
- ☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

- ☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.
- ☐ Please charge Deposit Account 08-0380 in the amount of \$[]. A copy of this Statement is enclosed.
- ☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

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Dated

January 7, 2003

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| PTO-1449 REPRODUCED | | ATTORNEY DOCKET NO. 0399.2026-001 | | APPLICATION NO. 10/071,894 | |
| INFORMATION DISCLOSURE CITATION IN AN APPLICATION | | APPLICANT Michael C. Lorenz, et al. | | | |
| January 7, 2003 (Use several sheets if necessary) | | FILING DATE February 8, 2002 | | CONFIRMATION NO. 8700 | GROUP 1651 |
| PATENT DOCUMENTS | | | | | |
| EXAM- INER INI- TIAL | | DOCUMENT NUMBER | ISSUE DATE / PUBLICATION DATE | | |
| | AA | | | | |
| | AB | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS |
| | AL | | | | |
| | AM | | | | |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | |
| | AR | Ashman, R.B. and Papadimitriou, J.M., "Production and Function of Cytokines in Natural and Acquired Immunity to <i>Candida albicans</i> Infection," <i>Microbiol. Rev.</i> , 59(4):646-672 (1995). | | | |
| | AS | Bodey, G. et al., "Fungal Infections in Cancer Patients: An International Autopsy Survey," <i>Eur. J. Clin. Microbiol. Infect. Dis.</i> , 11(2):99-109 (1992). | | | |
| | AT | Braun, B.R. and Johnson, A.D., "Control of Filament Formation in <i>Candida albicans</i> by the Transcriptional Repressor TUP1," <i>Science</i> , 277:105-109 (1997). | | | |
| | AU | Cannon, R.D., et al., "Cloning and Expression of <i>Candida albicans</i> ADE2 and Proteinase Genes on a Replicative Plasmid in <i>C. albicans</i> and in <i>Saccharomyces cerevisiae</i> ," <i>Mol. Gen. Genet.</i> , 235:453-457 (1992). | | | |
| | AV | Fonzi, W.A. and Irwin, M.Y., "Isogenic Strain Construction and Gene Mapping in <i>Candida albicans</i> ," <i>Genetics</i> , 134(3):717-728 (1993). | | | |
| | AW | Gillum, A.M., et al., "Isolation of the <i>Candida albicans</i> Gene for Orotidine-5'-Phosphate Decarboxylase by Complementation of <i>S. cerevisiae</i> <i>ura3</i> and <i>E. coli</i> <i>pyrF</i> Mutations," <i>Mol. Gen. Genet.</i> , 198:179-182 (1984). | | | |
| | AX | Höner Zu Bentrup, K., et al., "Characterization of Activity and Expression of Isocitrate Lyase in <i>Mycobacterium avium</i> and <i>Mycobacterium tuberculosis</i> ," <i>J. Bacteriol.</i> , 181(23):7161-7167 (1999). | | | |
| | AY | Kujau, M., et al., "Characterization of Mutants of the Yeast <i>Yarrowia lipolytica</i> Defective in Acetyl-Coenzyme A Synthetase," <i>Yeast</i> , 8(3):193-203 (1992). | | | |
| | AZ | Lo, H.-J. et al., "Nonfilamentous <i>C. albicans</i> Mutants are Avirulent," <i>Cell</i> , 90:939-949 (1997). | | | |
| EXAMINER | | DATE CONSIDERED | | | |

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|--|-----|---|----------------------------------|--|--------------|
| PTO-1449 REPRODUCED | | ATTORNEY DOCKET NO. 0399.2026-001 | | APPLICATION NO. 10/071,894 | |
| INFORMATION DISCLOSURE CITATION IN AN APPLICATION January 7, 2003 (Use several sheets if necessary) | | | | APPLICANT Michael C. Lorenz, et al. | |
| FILING DATE February 8, 2002 | | | | CONFIRMATION NO. 8700 | GROUP 651 |
| U.S. PATENT DOCUMENTS | | | | | |
| EXAM- INER INI- TIAL | | DOCUMENT NUMBER | ISSUE DATE / PUBLICATION DATE | | |
| | | | | | |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | |
| | AR2 | McKinney, J.D., et al., "Persistence of <i>Mycobacterium tuberculosis</i> in Macrophages and Mice Requires the Glyoxylate Shunt Enzyme Isocitrate Lyase," <i>Nature</i> , 406:735-738 (2000). | | | |
| | AS2 | Minard, K.I. and McAlister-Henn, L., "Isolation, Nucleotide Sequence Analysis, and Disruption of the MDH2 Gene from <i>Saccharomyces cerevisiae</i> : Evidence for Three Isozymes of Yeast Malate Dehydrogenase," <i>Mol. Cell. Biol.</i> , 11(1):370-380 (1991). | | | |
| | AT2 | Sedivy, J.M. & Fraenkel, D.G., "Fructose Bisphosphatase of <i>Saccharomyces cerevisiae</i> Cloning, Disruption and Regulation of the <i>FBP1</i> Structural Gene," <i>J. Mol. Biol.</i> , 186(2):307-319 (1985). | | | |
| | AU2 | Tzschope, K., et al., "trans-Dominant Mutations in the GPR1 Gene Cause High Sensitivity to Acetic Acid and Ethanol in the Yeast <i>Yarrowia lipolytica</i> ," <i>Yeast</i> , 15(12):1645-1656 (1999). | | | |
| | AV2 | Wach, A., et al., "New Heterologous Modules for Classical or PCR-based Gene Disruptions in <i>Saccharomyces cerevisiae</i> ," <i>Yeast</i> , 10(13):1793-1808 (1994). | | | |
| | AW2 | Wright, W.L. and Wenzel, R.P., "Nosocomial <i>Candida</i> ; Epidemiology, Transmission, and Prevention," <i>Infect. Dis. Clin. North. Am.</i> , 11(2):411-425 (1997). | | | |
| | AX2 | GenBank Accession No. AF222905, "Candida albicans Isocitrate Lyase (ICL1) Gene, Complete CDS," (2002) [online], [retrieved on 11/19/2002]. Retrieved from the Internet: <URL:http://www.ncbi.nlm.nih.gov>. | | | |
| | AY2 | GenBank Accession No. AAF34695, "Malate Synthase [<i>Candida albicans</i>]," (2002) [online], [retrieved on 11/19/2002]. Retrieved from the Internet: <URL:http://www.ncbi.nlm.nih.gov>. | | | |
| | AZ2 | Lorenz, M.C. et al., "The Glyoxylate Cycle is Required for Fungal Virulence," <i>Nature</i> 412(6842):83-86 (2001). | | | |
| | AR3 | Lorenz, M. C. and Fink, G. R., "Life and Death in a Macrophage: Role of the Glyoxylate Cycle in Virulence," <i>Eukaryot Cell</i> 1(5):657-662 (2002). | | | |
| | AS3 | Lorenz, M. C., "Genomic Approaches to Fungal Pathogenicity," <i>Current Opinion in Microbiology</i> 5:372-378 (2002). | | | |
| EXAMINER | | | DATE CONSIDERED | | |